

STATE OF NORTH CAROLINA

Approved Classification: _____

OFFICE OF STATE PERSONNEL

Effective Date: _____

Analyst: _____

POSITION DESCRIPTION FORM (PD-102R-92)

(This Space for Personnel Dept. Use Only)

1. Present Classification Title of Position Transportation Engineer I	7. Pres. 15 Digit Position No.	Prop. 15 Digit Pos. No.
2. Usual Working Title of Position Assistant Group Leader	8. Department, University, Commission, or Agency Transportation	
3. Requested Classification of Position Transportation Technician VI	9. Institution & Division Highways	
4. Name of Immediate Supervisor	10. Section and Unit Location & Surveys	
5. Supervisor's Position Title & Position Number TE II - Property Surveys	11. Street Address, City and County	
6. Name of Employee	12. Location of Workplace, Bldg. And Room No.	

I. A. Primary Purpose of Organizational Unit:

The primary purpose of Location & Surveys is to serve as support services in providing engineering analysis, mapping and other data for the design of transportation facilities and the acquisition of property for the construction of transportation facilities.

B. Primary Purpose of Position:

This is the highest level of technical support in the Unit, performing a wide variety of the most complex and advanced assignments including analyzing, evaluating, computing, editing, and processing higher level engineering and other survey information. Work involves an extremely wide range of independent decision-making and use of judgment, and would normally include some supervision and providing work direction to others. The primary purpose of this position is to assist the Property Surveys Engineer in supervising and directing a moderately sized engineering oriented section in plan preparation and review, compilation of condemnation survey maps, preparation of exhibits to be used in court proceedings by the NC Attorney General's office, property tie computations during latter stages of plan sheet development, coordinating and scheduling work, and the evaluation, review, and use of survey data. Employee will check and review technical aspects of survey data and mapping to ensure that proper procedures are followed and appropriate accuracies are obtained according to NCDOT, Location & Survey, and generally accepted surveying and mapping standards. Duties will involve review of litigation survey mapping and serve as an expert witness when required on litigation cases. Work is performed under very limited technical and fairly limited administrative supervision and may include other duties and responsibilities as assigned.

C. Work Schedule:

8:00 AM to 5:00 PM, or some variation thereof, Monday through Friday, for a total of 40 hours per work week. Flex time or seasonally variable work hours may be used in individual offices based upon needs and circumstances.

D. Change in Responsibilities or Organizational Relationship:

This is a reassignment of position to provide for a higher level of technical support in the Unit. Increased legal responsibilities of the Unit with regards to condemnations and other property acquisitions have created a need for a higher level technician to deal directly with legal proceedings. Creation of this level of technical position allows for improved quality control in reviewing data from statewide sources, reviewing and evaluating computer and survey hardware and software, and procedures documentation and training.

II. A. DESCRIPTION OF RESPONSIBILITIES AND DUTIES: Method Used (Check One) Order of importance _____
Sequential order _____

Place an asterisk (*) next to each essential function. (See instructions for complete explanation.) Please note percentage of time for each function.

No.	%
-----	---

- | | | |
|---|----|---|
| 1 | 60 | Final Map/Exhibit Review - Monitor activities required to provide property survey and related products, such as court maps, aerial photographs with overlays, charts, and other exhibits as requested by Legal Department. This position has the responsibility of checking all final property survey maps before their distribution. Checks are made to ensure that all areas of take listed in the legal file are shown on the map and that the property shown is covered by the deed description. Also, the position reviews maps to be sure that map conforms to latest project design plans. Works with, and in the absence of, the Property Survey Engineer in assisting the Attorney Generals' office with special requests and exhibits to be used in court. This position serves as an expert witness in litigation hearings and trials. Assists lower level technicians in complex computations in the preparation of and revisions to property survey maps. |
| 2 | 20 | Computations - Performs more complex level computations and revisions, required for special requests such as advance R/W acquisitions for the R/W Department; revisions to final condemnation maps caused by recent plan design changes that may be necessary for settlement of claim; other computations as requested by other engineers and attorneys. |
| 3 | 10 | Training - This position will evaluate the technical training needs of the technicians in the group. This position will recommend available training, provide one-on-one as well as classroom training for the group. |
| 5 | 5 | Personnel - Provide input into technicians work plans and assist in PM counseling sessions as directed by the Property Survey Engineer. This position will provide input into the hiring and development or disciplinary actions of employees based upon their technical abilities. |
| 6 | 5 | Special Projects/Other - Other survey, mapping, or other activities required by supervisor or Unit management. |

II. B. OTHER POSITION CHARACTERISTICS: (con't)

1. Accuracy Required in Work:

Engineering and surveying measurements and calculations necessary to millimeter reporting is required. A thorough knowledge of necessary data and proper format is needed. A thorough knowledge of the legal and technical aspects of route location, geodetic surveys, boundary surveys, and others as needed.

2. Consequence of Error:

Inaccurate procedures and/or failure to follow established guidelines and procedures can result in erroneous data being conveyed to others for use in design or property acquisition, requiring resurveys and redesign causing project delays and costs overruns. Poor understanding of legal and/or technical aspects can result in additional costs for litigation or further costs in proper establishments of boundaries. Errors in property data can result in purchase of property from someone other than the owners. Erroneous data or failure to follow proper procedures could result in loss of court cases in which this position is greatly involved.

3. Instructions Provided to Employee:

Position requirements include sufficient experience and knowledge to enable the employee to perform the duties of this position. Goals are defined and procedural guidelines are established. Deadlines are established when applicable. It is usually up to the employee to ensure completion of tasks in a timely and accurate manner, and to determine the best method to resolve issues, provide and present data, or prepare for the assigned task. Instructions may be either oral or written and may be general or specific in nature, according to the type and scope of work.

4. Guides, Regulations, Policies and References Used by Employee:

NCDOT Highway Design Manual; AASHTO Geometric Design Policy; CADD, GPS, and other computer references and manuals; General Statutes of North Carolina as related to Highways; NCDOT Personnel Manual; NCDOT Field Fiscal Procedures Manual; NCDOT Workplace Safety Manual; NCDOT and FHWA Manuals on Uniform Traffic Control Devices (MUTCD); Legal Principles of Boundary Surveying and other legal texts on surveying; various engineering and surveying texts including cadastral, geodesy, and route location; general practices, principles, procedures, and ethics of professional engineering and surveying as described by the NC State Board of Registration for Professional Engineers and Registered Land Surveyors; dictionary.

5. Supervision Received by Employee:

This employee is under the supervision of the Property Surveys Engineer. Very little daily instruction or supervision is provided on 90% of the duties of the position. Technical problems are either resolved at this level or referred to supervisors for involvement and resolution. Tasks and duties may be reviewed during and after completion, but due to the independent operation of this position, specific activities that lead to task accomplishment are not often reviewed. Personnel matters are reviewed with immediate supervisor as needed. Personnel problems are referred to supervisor for resolution.

6. Variety and Purpose of Personal Contacts:

Personal contact is with the Location & Surveys personnel at all levels, staff of other Units, Divisions, or Branches of NCDOT, representatives of private engineering firms that may be doing work for this Unit, attorneys representing NCDOT or others, County Manager's or Register of Deed staff working in tax offices, municipal engineering units, and utility representatives, and general public. Contact with property owners may be required on special projects or as required by the Property Survey Engineer.

7. Physical Effort:

Strenuous physical effort is not usually required however, stress management is a major concern. Duties require long periods of work at CADD workstations which involves intense concentration. Outside work on special projects may occur in any type of geographic conditions. Some physical labor such as traversing rough terrain, chopping brush, or carrying heavy or cumbersome equipment may be required at times. Travel to different areas of the state may be required for some tasks.

8. Work Environment and Conditions:

Work is 95% indoors, in a controlled. Work is primarily limited to office duties located in the central office of the Location and Surveys Unit. On occasion visits are made to the Legal department in the Transportation Building or to the field offices of the Location and Surveys Unit across the state. Employee may be assigned to work with a field survey crew on special projects. Outside work is subject to any type of weather conditions and may involve periods of time in adverse conditions. This employee may be exposed to high volumes of traffic, animals, insects, snakes, and poisonous plants.

9. Machines, Tools, Instruments, Equipment and Materials Used:

Computers; CADD workstations; hand-held calculators; triangles, scales, and other hand-drafting or measuring equipment; manuals; large photographs and plan sheets; telephone. A general knowledge of the operation of survey equipment such as electronic theodolites, GPS receivers, tripods, bush axes, and others is required. Operation of motor vehicles is required.

10. Visual Attention, Mental Concentration and Manipulative Skills:

Computer/calculator operation, writing memos, and compiling reports require keypunch and writing abilities. Mental concentration is required to plan and coordinate activities, review data, solve surveying and engineering problems, and work with others in problem solving. Visual as well as mental attention and ability is required in reviewing data and project evaluation.

11. Safety for Others:

Most of the work performed by the employee is independent of other employees. However, practical application of work duties and an overall concern for fellow employees must be executed and ever present in the mind of all employees.

12. Dynamics of Work:

Court exhibits may go through several revisions based upon the needs of attorneys and the direction of court cases, often with very short notice. Engineering and design standards are often revised. Methods, procedures, and equipment used for collecting route location and other survey data, including survey equipment and computer hardware and software, are always being revised, upgraded, or improved. These changes require a continuous upgrading and maintenance of knowledge of the engineering and surveying professions.

III. KNOWLEDGES, SKILLS & ABILITIES AND TRAINING & EXPERIENCE REQUIREMENTS:

A. Knowledges, Skills and Abilities:

Thorough knowledge of procedures, methods and equipment used in performing engineering and other surveys. Thorough knowledge of mathematical applications, including algebra, geometry, and trigonometry. Skilled in CADD, skilled in the use of survey instruments, and skilled in the use of office equipment such as calculators and computers. Ability to read, interpret and explain such things as construction plans, court records, title records, technical and procedural manuals. Ability to plan, direct, supervise, train, and evaluate the work of lower level technicians; ability to understand and follow written or oral instruction, communicate with the general public and other non-technical groups; take notes and prepare or review reports. Ability to review and evaluate the work of others.

B. 1. Required Minimum Training:

Graduation from a two year technical college with a degree in Civil Engineering or Survey Technology and seven years of progressive transportation experience.

2. Additional Training/Experience:

Additional training as needed will be supplied by supervisor and Location & Surveys Unit or NCDOT Training Personnel.

3. Equivalent Training and Experience:

Graduation from high school and nine years of progressive transportation technician experience; or an equivalent combination of training and related experience. In lieu of a civil engineering degree (BS or AS), successful completion of the ITRE Highway Engineering Concepts Course will be required.

C. License or Certification Required by Statute or Regulation:

NC Driver's License is required.
North Carolina Registered Land Surveyor preferred

IV. CERTIFICATION: Signatures indicate agreement with all information provided, including designation of essential functions.

Supervisor's Certification: I certify that (a) I am the Immediate Supervisor of this position, that (b) I have provided a complete and accurate description of responsibilities and duties and (c) I have verified (and reconciled as needed) its accuracy and completeness with the employee.

Signature _____ Title: _____ Date: _____

Employee's Certification: I certify that I have reviewed this position description and that it is a complete and accurate description of my responsibilities and duties.

Signature _____ Title: _____ Date: _____

Section or Division Manager's Certification: I certify that this position description, completed by the above named immediate supervisor, is complete and accurate.

Signature _____ Title: _____ Date: _____

Department Head or Authorized Representative's Certification: I certify that this is an authorized, official position description of the subject position.

Signature _____ Title: _____ Date: _____